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State of South Carolina

SIXTH ANNUAL REPORT

of the

State Board of
Engineering Examiners

to the

GOVERNOR

1928



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For Year Ending June 30, 1928

STATE DOCUMENTS

State of South Carolina

SIXTH ANNUAL REPORT

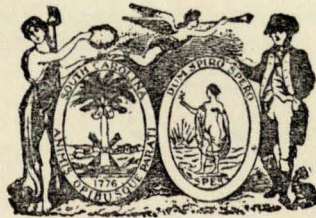
of the

State Board of
Engineering Examiners

to the

GOVERNOR

1928



For Year Ending June 30, 1928

LETTER OF TRANSMITTAL

COLUMBIA, S. C., Oct. 1, 1928.

To *His Excellency*, HON. JOHN G. RICHARDS,
Governor of South Carolina,
Columbia, S. C.

SIR:

In compliance with Section 6, of an Act providing for the creation of a State Board of Engineering Examiners and regulating the practice of Engineering in the State of South Carolina, we have the honor to transmit this Sixth Annual Report of the activities of the Board, together with a statement of receipts and expenditures and a list of those registered in accordance with the Act.

The Board desires to express its appreciation of the cooperation and assistance received from State officers.

Respectfully submitted,

L. S. LETELLIER, *Chairman,*
T. KEITH LEGARÉ, *Secretary.*

Personnel of South Carolina State Board of Engineering Examiners

L. S. LeTELLIER, *Chairman*, Charleston,
Professor of Civil Engineering, The Citadel,
Member, Society for Promotion of Engineering Education,
Associate Member, American Society of Mechanical Engineers.

G. E. SHAND, *Vice-Chairman*, Columbia,
President, Shand Engineering & Sales Company,
Member, American Society of Civil Engineers.

T. KEITH LEGARÉ, *Secretary*, Columbia,
Vice-Pres. and Sales Mgr., Carolina Concrete Pipe Co.
Sec-Treas., Nat. Council State Boards of Engineering Examiners.
Member, American Society of Civil Engineers,
Member, American Society of Municipal Improvements.

GEORGE WRIGLEY, Greenville,
In Charge Electrical Dept., J. E. Serrine & Co., Engineers.
Member, American Institute of Electrical Engineers,
Member, National Electric Light Association.

W. S. TOMLINSON, Columbia,
President, Tomlinson Engineering Company,
City Engineer, City of Columbia,
Member, American Society for Municipal Improvements.

REPORT

of the

State Board of Engineering Examiners

HISTORY OF ACT PROVIDING FOR REGISTRATION

The Act providing for the creation of a State Board of Engineering Examiners and the registration of professional engineers and land surveyors was passed by the State Legislature of South Carolina at the 1922 Session and was approved by Governor R. A. Cooper, on March 22, 1922. The Act as now amended was approved by Governor John G. Richards, on March 10, 1928.

The members of the Board were appointed and commissioned by Governor Wilson G. Harvey, on May 31, 1922, as follows: G. E. Shand, of Columbia; George Wrigley, of Greenville; L. S. LeTellier, of Charleston; W. S. Tomlinson, of Columbia; T. Keith Legaré, of Columbia.

The Board held its first meeting in Columbia on June 17, 1922 and was organized by the election of officers and the appointment of committees. The present officers and members of the Board are given on the opposite page.

SIX YEARS OF ENGINEERING REGISTRATION LAW ADMINISTRATION IN SOUTH CAROLINA

It has now been six years since the Act authorizing the registration of engineers and land surveyors became effective in South Carolina; and it may be of interest to give a brief resumé of the experience of the Board in administering the law, together with such remarks and recommendations as this experience seems to warrant. It may be said at the outset that the operation of the Act has not brought about any epoch-making change either in the character of the engineering work being done in the State or in the status of the engineering profession. There has been, however, in the opinion of the Board, a slow but substantial progress which warrants confidence in the ultimate realization of the objects of the Act.

In any statement of the Board's experience, it should be pointed out that the object of registration was not primarily to improve the status of the engineering profession. As badly as this may be needed, it is nevertheless distinctly a matter for the profession to work out for itself. The General Assembly was very properly concerned only with enacting such legislation as would protect and

advance the interests of the public in so far as such interests are effected by the competency and the honesty of engineers. The principle that the State may as a matter of public policy demand that those who hold themselves out to the public as qualified to perform certain professional services must exhibit the necessary minimum qualifications for the adequate performance of such service has long since been recognized. While laws enacted under this principle are to protect the public, it is believed that the interests of the public and of a professional group are so intertwined that great advantages must accrue to the individual professions as a result of the operation of these laws. To paraphrase the statement of a business leader, it may be said "that what is not good for the public is not good for engineers." Yet such benefit to either the public or professional groups does not come quickly.

Up until six years ago there was no restriction placed upon the practice of engineering or land surveying in South Carolina. Each practitioner was the sole judge of his own qualifications. Even now in many states of the United States this condition obtains. It seems to indicate that as a group engineers have fallen far behind their professional brethren in bringing about conditions of practice in which their technical skill can be most effectively applied. In 1922 a small group of engineers in South Carolina presented their views so effectively to the General Assembly that a registration law was enacted. It was a weak law, but it went as far as could reasonably be expected at the time. The Act in its original form sought to define engineering and the practice of engineering and set up certain standards of qualification. It did not prohibit any citizen from practicing or offering to practice engineering and land surveying, but it did definitely recognize a group of "registered" engineers and land surveyors, and provided the authority and machinery for registration. In a word the General Assembly, through the proper administrative agency, set up a list of engineers who had complied with a definite, though low, standard of qualification, and left it to the public and the engineers to give such weight as they saw fit to this official certification. It was with this precarious authority that the Board set about its task.

From the beginning it was apparent to the Board that the progress of the registration idea in South Carolina depended upon getting from the public and the engineers themselves the support necessary to give meaning and significance to the terms "registered engineer" and "registered land surveyor." Had these terms failed to gain recognition the Act would have been ineffectual from the beginning. While the public, it must be admitted, is not greatly concerned with whether engineers are registered or not, there is much evidence that, through the publicity which has been given

to the Act, there is a growing realization that engineering service, like any other sort of professional service, is best performed by properly trained specialists. Just to the extent that registered engineers and land surveyors demonstrate a capacity for safer, more economical and more ethical professional service will this sentiment grow and throw around them the protection of public confidence.

Had the engineers of the State been unimpressed by a law which made registration optional and still permitted unrestricted practice, and refused to register in large numbers, the Act would have been dead from the day that it was passed. Actually, however, an overwhelmingly large number of engineers, including most of the outstanding practitioners of the State, did register and support the Board in its efforts to gain recognition for the term "registered engineer." It is to the lasting credit of these men that although they saw clearly that any tangible benefit to the profession would be realized only after a period of years, were far-sighted enough to sense its promise of benefit to the State and of ultimately creating for them an opportunity to raise the standards of professional practice and produce a better quality of work, thus benefitting all concerned. It seems to be characteristic of the high type engineer that he seeks his reward from society through constant improvement of his work rather than through exploitation and clamor. His immediate objective in registration is primarily to get the practice of engineering upon the right sort of plane so that the public may get the fullest benefit of his services. His own reward will take care of itself.

Starting as it did with the support of the engineers of the State the Board has sought through the six years of its existence to make the Act effective. The main administrative task was to develop a system of examination that would truly reflect the competency of the candidates for registration. The Board realized that no set of examination questions would infallibly demonstrate a candidate's qualifications for the practice of engineering or land surveying. There are many men who in practice have developed the highest sort of skill, until it comes to be a sort of intuitive process for them to arrive at sound conclusions, yet who could be "flunked" by an examination that a college student might pass with credit. It is difficult for an examination to reveal that subtle quality called "judgment," without which no engineer is competent. For these reasons the Board has not given examinations containing a mass of petty, theoretical questions about which the most accomplished engineer may be hazy. It has sought to make its questions direct, practical, and relating directly, in the main, to the engineering specialty in which the candidate professes proficiency. His answers are considered with reference to the record that he

has made and to the tangible evidence which he submits of his experience, and the examination is prolonged until the Board is satisfied that the candidate is competent or incompetent as the case may be. College training is regarded as one of the factors that helps to make an engineer, but the possession of a college diploma is not regarded as *prima facie* evidence that the candidate is an engineer.

Another problem, which stated in an academic way seems to present insuperable difficulties, is that engineering is so varied in its demands for specialized knowledge and skill that registration of a man to practice engineering without definitely limiting him to his specialty will inevitably license him to do or undertake to do many things of which he is profoundly ignorant, thus defeating the whole purpose of registration. Practically the problem presents no such difficulty. Obviously no law could be framed that could reasonably guarantee the professional capacity of an engineer to perform every professional task that might come his way. The remedy here does not lie in the enactment of laws, but in the development of a high standard of professional honesty. Registration seeks only to so draw the lines that within the registered group there will be a minimum of men lacking a sense of professional responsibility for the character of their work. It may be said that the highly trained man in some speciality would probably be the quickest to recognize his incapacity to tackle a job out of his specialty. The real danger lies with the half-trained man who has a smattering of knowledge in many specialties and real skill in none, and it is this type who, despite his ability to answer superficial questions over a wide range of examination, is most likely to fail of registration. The Board always has a sense of security when a candidate comes before it and demonstrates mastery of a specialty. Such a man usually understands the rigid technical procedure by which good engineering work is done, irrespective of the field in which it may be applied, and he is the least likely to fail to check every step that he takes.

Another aspect of administration that presents a real difficulty is linked up with the great change that is taking place in the agencies through which engineering service is rendered. With the development of large engineering companies and corporations, and the growth of large state, municipal, public utility, railroad and other engineering organizations, the practice of engineering is becoming less and less a field for the individual practitioner. Whatever may be thought of this form of organization, it seems that it will be the agency through which practically all of the engineering work of the future will be done. Unlike such professional service, for example, as that of the physician, which is and will probably always be a service of an individual to an individual, engineering

lends itself to group service. Except for a few specialized fields and a limited group of outstanding consultants, it seems that the engineer of the future is to be a salaried man. In the main it is to be expected that the large organizations will be manned by competent engineers, but it is not at all improbable that organizations will appear in this field who cannot or will not render the sort of service that the public has a right to expect. In principle the organization should be required to demonstrate its qualifications just as the individual is, but since an organization cannot well be submitted to an examination, the Act provides that one or more officers or employees of such organizations shall be registered. This is not entirely satisfactory, because the organization may be carrying on large and important operations under such conditions that the registered officers or employees have no direct supervision over the work. Large numbers of engineers working for these large organizations have as a matter of professional pride secured registration certificates, despite the fact that there is no legal requirement forcing them to do so. The Board hopes that as the idea of registration gains more widespread acceptance, all qualified engineers will voluntarily follow this course. In this way an obvious defect in the law could be very largely overcome and the value of registration enhanced by voluntary rather than enforced measures.

In the case of land surveyors, there seems to be a disposition to regard the service performed as relatively unimportant. This is indicated by the low fees that this work brings, and a desire to regard it as a kind of side line for a man who is making some other work his main occupation. It seems that it would be a sounder view to regard surveying as one of many engineering specialties and seek to gradually elevate the standards until surveying is done with the same care as other engineering work. This is distinctly in the interests of the public, as well as of the surveyors. Land surveying is probably now regarded as a poor occupation because so much poor surveying has been done. To any one who has had occasion to deal with old records, it is clear that the money which has been saved by paying poor fees to the surveyor has been lost many times over by the multitude of troubles that have resulted from poor work. The most precise legal procedure, expensive and time-consuming, is often based upon survey work that is anything but precise. The Board hopes that registration may be the means of improving this situation, for it does not share the opinion that the work of the land surveyor is less important or less entitled to professional recognition than that of other engineering specialties.

The foregoing paragraphs have dealt in a disconnected sort of way with the experience of the Board under the Act in its original form. The six years covered by this period may be regard-

ed as the trial and error stage of registration in South Carolina. The Board is now functioning under a fundamentally changed Act, and it is thought that we are now entering the second stage in which the effect of the law may become more pronounced and the achievement of its objects brought into closer view. At the 1928 session of the General Assembly the law was amended by dropping the provision that made registration optional. Under the present law any engineer practicing or offering to practice engineering, with certain specified exceptions, must be registered. Six years ago it was difficult to get recognition for the idea of registration, even with the optional and the "grandfather" clauses in the bill; yet after six years it was possible to enact a law that excluded both of these features. South Carolina is now substantially on a parity with all other states that have registration laws. It is worth noting that the opposition to the enactment of the new law was met so effectively by an able committee of engineers that it was passed in substantially the form in which it was presented.

So far as the law is concerned, it may be said that the object of registration has been achieved. But from the standpoint of the Board, the realization of the fruits of registration must wait on further building up of the standards which the Board is able to enforce until a point is reached at which a certificate of registration is a virtual guarantee of the high professional standing of the holder. The Board can, within the discretion allowed it by the Act, gradually demand of candidates for registration a higher standard of qualification. It is believed that this is the proper course to pursue, because as engineering knowledge and skill improve, so should the qualifications of engineers be progressively higher. But the greatest progress in this respect can and should come from engineers themselves. The quality of a professional group is measured rather by the standards that it sets for itself voluntarily rather than from a standard enforced by law. The law must be had, in order that the authority residing in the State may be effective in controlling such professional activity as would not be amenable to standards and codes of ethics arising within the profession, but no law of this kind can be wholly effective unless there is back of it a professional solidarity that demands a high standard of performance as a matter of principle.

In South Carolina today the greatest single contribution that could be made to the success of registration would be the support of an engineering society. The world is already overloaded with useless organizational machinery, but the engineers of South Carolina still have the opportunity of providing one for themselves that could be useful. The point is that a professional group should set its own standards, rather than to depend entirely upon the State to do it for them. The State has defined the term engi-

neer and set up a minimum standard for the practice of engineering, but the engineers themselves are still wandering in the wilderness so far as bringing to a focus their combined influence towards achieving the objects of registration and moulding themselves into a truly professional group is concerned. To do this is not an easy task and efforts have failed because of some fundamental mistake in setting up the organization, the chief of which has been a failure to get a high enough standard of membership. Such organizations cannot live unless membership is something to be won rather than to be had for the asking. As a matter of fact, the standards for membership should be higher than those required for registration, for it is the object of the State simply to protect the public against incompetence and dishonesty, whereas a representative society should concern itself with achieving constantly improving standards of professional practice.

In conclusion, it may be said that the Board feels that it can under the revised Act do much in the near future to demonstrate the validity of the principle of registration. It is now possible to gradually draw the lines around the group of professional engineers who are qualified to render safe and competent engineering service. It is hoped that this will result in greater recognition of the capacity of local men to carry on our large and important projects. There is no idea of setting up an embargo on outside talent, but it is surely in the interest of the State to find as much as possible of its professional talent within its own borders.

GENERAL STATUS OF REGISTRATION IN THE UNITED STATES

Lousiana was the first State to enact a law regulating the practice of engineering, this was in 1908. Since then the following States have adopted registration laws: Arizona, Arkansas, Colorado, Florida, Idaho, Indiana, Iowa, Lousiana, Michigan, Minnesota, New Jersey, New York, North Carolina, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Virginia, West Virginia, Wyoming and Hawaii. The National Council of State Boards of Engineering Examiners is composed of one member from each of the State Boards, except New Jersey, New York and Pennsylvania, and the purpose of Council is "to examine the state laws providing for registration of engineers and the customs and rules of procedure of the different boards in the examination of applicants, to consider suggestions and recommendations for uniformity of practice so far as the same can legally be done by the different State Boards, and to provide for reciprocal relations between the State Boards for granting registration to applicants from other states on equal terms of examination."

RECIPROCAL REGISTRATION

The South Carolina Act provides for reciprocity with other states in the matter of registration of engineers. Articles of agreement on reciprocal registration have been adopted by the National Council and accepted by the South Carolina Board. These articles are printed in full elsewhere in this report. The engineer whose practice extends into other states will find the conditions of registration greatly simplified in those states which have ratified this agreement.

The Board charges no fee for issuing a certificate of reciprocal registration, but registrants are respectfully requested not to apply for reciprocal registration if they have no need for it, and unless convinced that they can satisfy the Board that they possess the qualifications outlined. Special application forms for reciprocal registration will be furnished by the Board.

MEETINGS, FEES, RENEWALS, ETC.

Regular meetings of the Board are held on the second Tuesday of July and the first Tuesday of December. All applications for registration must be made on blanks provided by the Board, accompanied by the required fee and filed with the Secretary of the Board at least ten days before meetings. The fee of \$15.00 required by law before a candidate can be admitted to examination will not be returned after candidate has taken examination irrespective of whether he passes or fails; nor will fee be returned if candidate fails to appear after being duly notified to report for examination, but the Board may at its discretion admit the candidate to a subsequent examination without additional fee.

All certificates of registration expire on June 30th, of each year. The annual renewal fee of \$5.00 for engineers and \$3.00 for surveyors is payable on or before the 3rd Tuesday of June. If not paid until the month of July a penalty of \$1.00 will be added. After August 1st an additional penalty of 10 per cent for each month will be added to the fee and all registrations not renewed before January 1st will be revoked. The Board, for reasons it may deem sufficient, may re-issue a certificate of registration to any person whose certificate has been revoked.

Application blanks and any other information desired will be furnished by the Secretary of the Board, address P. O. Box 264, Columbia, S. C.

Financial Statement

STATEMENT OF RECEIPTS AND DISBURSEMENTS

July 1, 1927 to June 30, 1928

Balance July 1, 1927	\$973.72
<i>Receipts:</i>	
Registration Fees Paid to State Treas.	901.00
Interest Credited by State Treasurer	8.56
	<u>\$1,883.28</u>
<i>Disbursements:</i> (Vouchers audited)	
Requisitions on Comptroller General	\$1,288.35
Cash Balance, June 30, 1928	594.93
	<u>\$1,883.28</u>

ANALYSIS OF DISBURSEMENTS

July 1, 1927 to June 30, 1928

Salaries (Secretary)	\$ 600.00	
Per Diem of Members	75.00	
Clerical Help	260.00	
Travel	214.20	
Printing	34.75	
Office Supplies	36.65	
Association Dues	40.00	
Insurance (Premium on Bond)	15.00	
Lettering Certificates	3.25	
Advertising	9.50	\$1,288.35
		<u></u>

AFFIDAVITS:

State of South Carolina, County of Charleston,

I, L. S. LeTellier, Chairman of the State Board of Engineering Examiners do hereby certify that the financial report herewith rendered of the State Board of Engineering Examiners is true to my own knowledge except those matters and facts stated on information and belief, and as to those, I believe it to be true.

(Signed) L. S. LeTELLIER,

Subscribed and sworn to before me, this 8th day of Sept., 1928.

(Signed) O. J. BOND,
Notary Public for South Carolina.

State of South Carolina, County of Richland,

I, T. Keith Legare, Secretary of the State Board of Engineering Examiners do hereby certify that the financial report herewith rendered is a correct statement of the finances of the State Board of Engineering Examiners for the period specified.

(Signed) T. KEITH LEGARE,

Subscribed and sworn to before me, this 17th day of September, 1928.

(Signed) WM. A. CRARY, JR.,
Notary Public for South Carolina

Hon. Albert S. Fant, State Bank Examiner, Columbia, S. C.

Dear Sir:

Pursuant to your instructions, we have made an examination of the accounts of Mr. T. Keith Legare, Secretary, STATE BOARD OF ENGINEERING EXAMINERS, for the period beginning December 20, 1927 and ending with the close of business on August 24, 1928. In order to show a complete year's business we have included figures for the months July 1, 1927 through December, the same having been copied from a previous report.

The Secretary has accounted for all receipts of record through remittances to the State Treasurer and bank balance of \$607.00 which will be remitted to the State Treasurer in due course of business.

On August 24, 1928 the Secretary had a balance of \$588.00 in bank, \$13.20 checks on hand, cash item of \$6.00 and balance of \$430.78 making a total of \$1,037.98 available with which to carry on the work of the office.

We have reconciled the accounts with bank and the State Treasurer and the balances as shown by the books are correct.

Report herewith.

Respectfully submitted

(Signed) W. V. SUTHERLAND,
Auditor, State Institutions.

(Signed) T. D. SIMMONS,
Assistant.

Columbia, S. C., August 30, 1928.

Copy to

Mr. T. Keith Legare, Secretary, State Board of Engineering Examiners,
Columbia, South Carolina.

ROSTER OF Registered Professional Engineers and Land Surveyors

Authorized to Practice in the State of South Carolina As of October 20, 1928.

Note—It is very important that the Secretary be notified of changes in position or address.

KEY TO ABBREVIATIONS IN CLASSIFICATION:

C.E., Civil Engr.; E.E., Electrical Engr.; E. M., Mining Engr.; M.E., Mechanical Engr.; L.S., Land Surveyor.

	Name and Position	Address	Classification	Certificate	
				Date	No.
	ADAMS, D. G., City Engineer.	City Hall, Spartanburg, S. C.	C.E., L.S.,	3-22-23	70
	ADAMS, J. K., Chief Struct. Designer, J. E. Sirrine & Co.	Greenville, S. C.	C.E.	3-22-23	72
15	ADAMS, T. C., Res. Engr., State Highway Department.	Ridgeland, S. C.	C.E.	6-22-26	307
	ALBERGOTTI, W. M., Mech. Engr., Gibbes Machinery Co.	Columbia, S. C.	M.E., E.E.	12-5-22	38
	ALLEN, W. M., Civil Engineer and Surveyor.	Dillon, S. C.	C.E., L.S.,	9-14-22	6
	*ALLEN, JAS. P., Civil Engr., (Retired).	11 Broad St., Charleston, S. C.	C.E., L.S.,	6-19-23	261
	ANDERSON, JOHN, Associate Prof. Engineering, The Citadel.	Charleston, S. C.	C.E.	9-14-22	7
	ANDERSON, N. S., Asst. to State Highway Engineer.	Columbia, S. C.	C.E., E.M.	3-22-23	246
	ANDERSON, S. G., Vice-Pres. and Cash., First Nat. Bank, Surveyor.	Woodruff, S. C.	L.S.	9-14-22	8

ARMSTRONG, F. E., Res. Engr., S. C. State Highway Department.	Walhalla, S. C.	C.E.	3-22-23	71
AVENT, HUGH P., Struct. Designer, J. E. Serrine & Co.	Greenville, S. C.	C.E.	12-6-27	318
BAILEY, O. A., Chief Engr., Chicago Bridge & Iron Works.	1305 West 105th St., Chicago, Ill.	C.E.	11-19-23	277
BAKER, H. J., Pres. and Gen. Mgr., Hugh J. Baker & Co.	P. O. Box 892, Indianapolis, Ind.	C.E., M.E.	1-27-27	317
BALDWIN, C. M., Civil Engr., Atlantic Coast Lumber Corp.	205 Dozier St., Georgetown, S. C.	C.E., L.S.	9-14-22	9
BALLENGER, C. P., Engr. Ballenger Paving Co.	226 Emaxcee Bldg., Greenville, S. C.	C.E., L.S.	3-22-23	73
BANGS, P. C., Dist. Engr. Warren Webster & Co.	7 Robinson St., Greenville, S. C.	M.E.	12-7-26	311
BARKLEY, M. B., Vice-Pres. Cameron & Barkley Co.	160 Meeting St., Charleston, S. C.	M.E.	3-22-23	74
*BARNWELL, J. W. Jr., Bridge Engr., S. C. State Highway Dept.	Columbia, S. C.	C.E., M.E., L.S.	3-22-23	87
BECKHAM, W. K., Maintenance Engr., S. C. State Highway Dept.	Columbia, S. C.	C.E., L.S.,	9-14-22	10
BEEBE, HARWOOD, Municipal and Civil Engineer.	Montgomery Bldg., Spartanburg, S. C.	C.E., L.S.	3-22-23	88
BELLENGER, HARRY O'B., Civil Engineer.	902 Barnwell St., Columbia, S. C.	C.E.	3-22-23	86
BISHOP, G. H., Consl. Engineer, Carolina Engineering Co.	917-919 Johnston Bldg., Charlotte, N. C.	C.E., L.S.	12-5-22	65
BISHOP, R. P., Engineer, The Carolina Engineering Co.	P. O. Box 1288, Charlotte, N. C.	C.E., L.S.,	12-5-22	40

BLACKWELDER, C. D., J. E. Serrine & Co., Engrs.	P. O. Box 266, Greenville, S. C.	C.E., M.E.	6-22-26	306
BOOKER, WARREN H., Consl. Engineer.	P. O. Box 292, Charlotte, N. C.	C.E., E.E.	12-2-24	285
BOESCH, CLARENCE E., Member of Firm, Gilbert C. White Co., Consl. Engineers.	P. O. Box 562, Durham, N. C.	C.E., M.E., E.E.	12-5-22	41
BOONE, L. C., County Engineer, Orangeburg County.	Orangeburg, S. C.	C.E.	9-14-22	11
BOWEN, S. H., City Engineer and Land Surveyor.	Easley, S. C.	C.E., L.S.	3-22-23	75
BOSWELL, R. NORMAN, Civil Engineer.	603 Woodrow St., Columbia, S. C.	C.E.	7-10-28	323
BOYKIN, A. B., Land Surveyor.	Camden, S. C.	L.S.	3-22-23	76
BOYKIN, L. W., Jr., Land Surveyor.	Aiken, S. C.	L.S.	7-10-28	324
BOYKIN, T. A., Overhead Dept. Broad River Power Co.	3101 First Ave., Columbia, S. C.	C.E., L.S.	3-22-23	77
*BRADLEY, HUGHES V., Res. Engr. State Highway Department.	Walterboro, S. C.	C.E., L.S.	3-22-23	82
BRICE, CHAS. M., Carolina Engineering Company.	P. O. Box 1288, Charlotte, N. C.	C.E., L.S.	3-22-23	85
BRIGGS, W. A., Engr. and Contractor.	Capers Bldg., Greenville, S. C.	C.E., L.S.	3-22-23	83
BROWN, ALEX T.,	Orangeburg, S. C.	C.E., L.S.	3-22-23	79
BROWN, D. P., Logging Supt.	Varnville, S. C.	C.E., L.S.	3-22-23	84

BUCK, F. E., Rec. Engr., State Highway Dept.	P. O. Box 1172 Columbia, S. C.	C.E., L.S.	12-7-26	313
BURDEN, HENRY S.,	1150 Willow Branch Ave., Jacksonville, Fla.	C.E.	3-22-23	78
BUSSEY, H. E., District Engr., General Electric Co.	Atlanta, Ga.	M.E., E.E.	4-21-25	293
BYERS, E. D., Jr., Res. Engr., State Highway Department.	Holly Hill, S. C.	C.E., L.S.	3-22-23	80
CAMPBELL, C. D., Maintenance Supervisor, State Highway Dept.	P. O. Box 87, Orangeburg, S. C.	C.E., L.S.	3-22-23	90
CANNON, O. B., Supt. of Newberry Schools and Land Surveyor.	Newberry, S. C.	L.S.	12-5-22	63
CATHEY, W. C.,	Route 11 Box 28, Charlotte, N. C.	C.E., L.S.	3-22-25	97
*CHAFFIN, WENDEL W., Civil Engineer.	Sanford, N. C.	C.E., L.S.	3-22-23	89
CHAPMAN, ROBT. H., Steam Engineering Dept., J. E. Sirrine & Co.	Greenville, S. C.	M.E.	3-22-23	99
CHEVES, H. C., Jr., Pres. & Treas., Cheves-Oliver Constr. Co.	54 Broad St., Charleston, S. C.	C.E., L.S.	3-22-23	93
*CLOWE, R. D., Res. Engr., State Highway Dept.	Spartanburg, S. C.	C.E.	3-22-23	98
COGGESHALL, J. W., Res. Engr., State Highway Dept.	Public Square, Darlington, S. C.	C.E., L.S.	3-22-23	96
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SCRUGGS, E. L., Engineer with Tucker & Laxton.	901 Independence Bldg., Charlotte, N. C.	C.E.	1-15-28	321
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SECREST, T. W., Land Surveyor.	Box 121, Waxhaw, N. C.	L.S.	2-22-23	208
SHAND, G. E., Pres. Shand Engineering & Sales Co., Vice- Chairman State Board of Engr. Examiners.	705 Lady St., Columbia, S. C.	C.E., M.E.,	9-14-22	1

SHAW, H. W., Surveying and Drainage.	Route 2, Bishopville, S. C.	C.E., L.S.	6-17-24	284
SHEARER, WM. H., County Supervisor.	506 Marshall Ave., Anderson, S. C.	C.E., L.S.	9-14-22	35
*SHEARER, W. A., Engineer and Surveyor, City Engineer.	506 Marshall Ave., Anderson, S. C.	C.E., L.S.	12-2-24	286
SHEPPARD, G. J., Sr. Asst. Engr., A. C. L. R. R. Co.	18 Jefferson St., Jacksonville, Fla.	C.E.	6-17-24	283
SHULER, E. H., Asst. Prof. of Math., Wofford College.	126 E. Cleveland St., Spartanburg, S. C.	M.E., E.E., L.S.	3-22-23	209
*SIFFORD, S. M., Land Surveyor.	Clover, S. C.	L.S.	3-22-23	240
*SIMMONS, J. W., Asst. City Engineer.	City Hall, Spartanburg, S. C.	C.E., L.S.	3-22-23	203
*SIMMONS, S. LEWIS, Sec.-Treas., Simons-Mayrant Co.	506 Peoples Bldg., Charleston, S. C.	C.E.	3-22-23	215
*SINGLETARY, J. A., Land Surveyor.	Cross, S. C.	L.S.	3-22-23	200
SIRRINE, J. E., J. E. Serrine & Co., Engineers.	South Main St., Greenville, S. C.	C.E., L.S.	12-5-22	60
SLATTERY, L. P., Pres. Slattery & Henry, Inc., Contractors.	Capers Bldg., Greenville, S. C.	C.E., L.S.	3-22-23	151
SLIGH, H. L., Maint. Engr., S. C. State Highway Dept.	Florence, S. C.	C.E.	3-22-23	207
SLOAN, E. D., Jr., Gen. Mgr. Carolina Road Surfacing Co.	Capers Bldg., Greenville, S. C.	C.E.	3-22-23	212
SMITH, ELROY G., Civil and Consulting Engineer.	Suite 313 Herald Bldg., Augusta, Ga.	C.E., L.S.	7-10-28	326

SMITH, WILBUR W., Civil Engineer.	Commercial Bank Bldg., Charlotte, N. C.	C.E.	1-23-25	289
SMITH, RUSSELL A., Civil Engr. and Land Surveyor	506 Circle Ave., Charlotte, N. C.	C.E., L.S.	12-5-22	59
SMITH, RAYMOND B., Surveyor, J. C. Kollock.	McClellanville, S. C.	L.S.	3-22-23	214
SMITH, T. J., Land Surveyor.	238 N. Purdy St., Sumter, S. C.	L.S.	3-22-23	211
SMYLY, J. W., Farmer and Land Surveyor.	R. F. D., Ruffin, S. C.	L.S.	3-22-23	202
SPELLMAN, J. F., Draftsman Engr., J. E. Serrine & Co., Engrs.	P. O. Box 1123, Greenville, S. C.	C.E., M.E.	3-22-23	204
STEVENSON, T. C., Pres. and Treas., Stevenson Engr. & Con- tracting Co.	St. Augustine, Fla.	C.E.	3-22-23	206
STRIBLING, H., Civil Engineer and Surveyor.	Merchts. & Farms. Bk. Bldg., Spartanburg, S. C.	C.E., L.S.	3-22-23	210
SULLIVAN, D. H., Chief Engr. and Gen. Mgr., Nisbet Wing- field Co., Inc., Consl. Engrs.	Marion Building Augusta, Ga.	C.E., L.S.	3-22-23	205
SULLIVAN, J. F., Consulting Engineer.	Room 2144, Municipal Bldg., New York, N. Y.	C.E.	1-27-27	318
*SUTTON, H. N., Alpha Portland Cement Co.	905 West 2nd St., Charlotte, N. C.	C.E.	3-22-23	213
SWEENEY, F. R., Consl. Engr., F. R. Sweeney & Co.	Anderson, S. C.	C.E.	3-22-23	247
TALLMADGE, WEBSTER, Steam Engineering Specialist.	50 Church St., New York, N. Y.	M.E., E.E.	6-22-26	303

TEEPLE, PERRY M., Consulting Engineer.	Columbia, S. C.	C.E., L.S.	9-14-22	36
THOMSON, B. M., Assistant City Engineer.	City Hall, Charleston, S. C.	C.E., L.S.	9-14-22	34
*TOBIN, L. P., Supt. and Gen. Mgr., Municipal Lighting, Water and Power Plant.	P. O. Box 132, Bamberg, S. C.	E.E., M.E.	3-22-23	217
TOMLINSON, W. S., Pres. Tomlinson Engineering Co., City Engineer, Member State Board of Eng. Examiners.	1226 Sumter St., Columbia, S. C.	C.E., L.S.	9-14-22	4
TOWLES, V. E., U. S. Bureau of Public Roads.	State Office Bldg., Columbia, S. C.	C.E., L.S.	12-13-26	315
*TROTT, CAMBRIDGE M., Vice-Pres., Charleston Engr. & Constr. Co.	Charleston, S. C.	C.E.	3-22-23	216
*TRYON, HENRY H., Forest Engineer.	(Unknown)	L. S.	12-2-24	288
TURBEVILLE, W. R., Field Bridge Engr., S. C. State Highway Dept.	Columbia, S. C.	C.E.	3-22-23	218
TUTEN, L. B.,	Brunson, S. C.	C.E., L.S.	3-22-23	219
*VERNER, C. V., Maint. Supv., S. C. State Highway Dept.	Chesterfield, S. C.	C.E., L.S.	3-22-23	221
VERNON, J. E., Contractor and Engineer	308 Wheeler St., Spartanburg, S. C.	C.E., L.S.	3-22-23	220
WAGENER, C. F., Chief Engr., J. B. McCrary Engineering Co.	1408 Cit. & Sou. Bk. Bldg., Atlanta, Ga.	C.E., M.E., E.E., L.S.	3-22-23	230
WALLACE, W. G., Assistant Lighthouse Engineer.	9 Ladson St., Charleston, S. C.	C.E.	6-19-23	273
WANNAMAKER, C. W., County Highway Engineer.	P. O. Box 66, Saluda, S. C.	C.E., L.S.	3-22-23	233

WANNAMAKER, H. L., Supt. Simons-Mayrant Co.	Charleston, S. C.	C.E.	3-22-23	248
WANNAMAKER, W. W., Jr., Res. Engr., S. C. State Highway Dept.	Orangeburg, S. C.	C.E., L.S.	12-1-25	301
WARDLAW, J. T., Engr., Lockwood, Greene Engineers, Inc.	Johnston Bldg., Charlotte, N. C.	C.E., M.E.	6-19-23	281
WATSON, GEO. L., Consulting Engineer.	150 Nassau St., New York, N. Y.	C.E.	12-5-22	61
WESTON, JULIAN B., Asst. Engr., Sanitary and Drainage Comm.	39 Broad St., Charleston, S. C.	C.E., L.S.	3-22-23	222
WESTON, WILLIAM, Field Engr., State Board of Health.	State Office Bldg., Columbia, S. C.	C.E.	3-22-23	225
WHITE, GILBERT C., Consl. Engr. and Pres., Gilbert C. White Co.	406 ½ Main St., Durham, N. C.	C.E.	12-5-22	67
WHITE, GUY H., Supt. of Water Plant, City of Columbia.	Filtration Plant, Columbia, S. C.	M.E.	9-14-22	37
WHITE, GEO. W., Harwood Beebe Co., Consl. Engrs.	Montgomery Bldg., Spartanburg, S. C.	C.E., L.S.	3-22-23	232
WHITE, H. H., Miller & White, Engineers and Surveyors.	Rock Hill, S. C.	C.E., L.S.	3-22-23	228
WHITFIELD, W. A., Dist. Office Engr., N. C. State Highway Comm.	P. O. Box 826, Asheville, N. C.	C.E.	12-5-22	66
WIEDEMAN, H. F., Wiedeman & Singleton, Inc., Consl. Engrs.	1404 Candler Bldg., Atlanta, Ga.	C.E.	6-23-25	294
WIGINGTON, B. F., Land Surveyor.	Route No. 1, Piedmont, S. C.	L.S.	12-7-26	316
*WILKINSON, A. C., Civil Engineer.	Box 367, Gaffney, S. C.	C.E., L.S.	12-1-25	300

WILLIAMS, J. W., Member of Firm, Sutton Bros., Gen. Contrs.	616 Atlantic Nat Bk. Bldg., C.E. Jacksonville, Fla.		6-19-23	275
WILLIAMSON, J. S., Div. Engr. S. C. State Highway Dept.	Columbia, S. C.	C.E.	3-22-23	229
WILLIS, W. N., Civil and Consulting Engineer.	Cleveland Bldg., Spartanburg, S. C.	C.E., L.S.	3-22-23	234
WILLSON, H. S., Globe Automatic Sprinkler Co.	1004 Norris Bldg., Atlanta, Ga.	M.E.	7-12-27	319
WILSON, CHAS. C., Arch't. and Engr.	Palmetto Bldg., Columbia, S. C.	C.E., L.S.	3-22-23	231
WILSON, T. E., Engineer.	Darlington, S. C.	C.E., L.S.	12-5-22	62
WINTER, JAS. A., Land Surveyor, H. M. Holland & Co.	Anderson, S. C.	L.S.	3-22-23	227
WISWALL, HOWARD, Land Surveyor and Timber Estimator.	10 Watauga St., Asheville, N. C.	C.E., L.S.	3-22-23	253
WOLFE, LENAIRE, F., Edisto Construction Co.	Orangeburg, S. C.	C.E., L.S.	3-22-23	226
WRIGLEY, GEORGE, Charge of Elec. Dept., J. E. Surrine & Co., Engrs.; Member State Board of Engineering Examiners.	Greenville, S. C.	M.E., E.E.	9-14-22	5
WYSE, F. C., Civil Engineer.	550 Poplar St., Spartanburg, S. C.	C.E., L.S.	7-10-28	325
*YOUNG, L. G., Civil Engineer.	Union, S. C.	C.E., L.S.	3-22-23	235

Deceased: B. R. Cowherd, Jr.; T. H. Hardin; Paul H. Norcross; H. C. Hightower; Arthur G. Boozer; Nisbet Wingfield.

*Indicates that renewal fee, due June 1928, has not been paid.

South Carolina Registration Law

Approved March 22, 1922; Amended March 10, 1928.

An Act Providing for the Creation and Establishment of a State Board of Engineering Examiners, Granting Certain Powers to and Prescribing the Duties of Said Board; Providing for the Examination and Registration Of Land Surveyors and Professional Engineers, Regulating the Practice of Engineering in the State of South Carolina and Providing Penalties for the Violation of This Act.

Section 1. That in order to safeguard life, health and property, any person practicing or offering to practice professional engineering or land surveying hereafter in this State shall be required to submit evidence that he or she is qualified so to practice, and shall be registered as hereafter provided; and that it shall be unlawful for any person to practice or to offer to practice professional engineering or land surveying in this State unless such person, has been duly registered as a professional engineer or land surveyor, or has been exempted from registration under the provisions of this Act. Provided, That the provisions of this Act shall not apply to land surveyors unless they desire to hold themselves out as "registered land surveyors."

Section 2. Under no circumstances shall the total amount of warrants issued by the State Auditor in payment of the expenses and compensations provided in this Act exceed the amount of the examination and registration fees collected as herein provided.

Section 3. As used in this Act:

(a) The "Board" means the State Board of Engineering Examiners provided for by this Act.

(b) "Surveyors." Any person who shall be engaged in locating, establishing or relocating any land boundary line between two or more land owners, or who shall be engaged in locating any United States Government, State, County, Township or Municipal land survey lines, or the lines of any public streets or roads, is hereby declared to be a Surveyor and as practicing land surveying within the provisions of this Act.

(c) Any person who shall be engaged in the designing or supervising of the construction, enlargement or alteration of any engineering structure, or utilities, as hereafter defined, or any part thereof for others and to be constructed by persons other than himself, shall be regarded as practicing Professional Engineering within the meaning of this Act. The practicing of professional engineering within meaning of this Act embraces the design and the supervision of the construction of public and private utilities, such as railroads, bridges, highways, roads, canals, harbors, river improvements, lighthouses, wet docks, dry docks, ships, barges, dredges, cranes, floating docks and other floating property, the design and the supervision of the construction of steam engines, turbines, internal combustion engines and other mechanical structures, electrical machinery and apparatus, and of works for the development, transmission or application of power, the design and the supervision of mining operations and of processes and apparatus for carrying out such operations, and the design and supervision of the construction of municipal works, irrigation works, water supply works, sewerage works, drainage works, industrial works, sanitary works, hydraulic works and structural works and of other public or private utilities or works which require for their design or supervision of the construction such experience

and technical knowledge as are required in Section 8 of this Act. The execution as a contractor of works designed by a professional engineer or the supervision of the construction of such work as a foreman or superintendent for such a contractor shall not be deemed to be the practice of professional engineering within the meaning of this Act.

(d) "Engineer" means any person who practices professional engineering.

Section 4. There is hereby created a State Board of Engineering Examiners consisting of five members to be appointed by the Governor within sixty (60) days after the passage of this Act. Three members of the Board shall be civil engineers, one a mining or electrical engineer, and the other one a mechanical engineer or naval architect. Of the members of the Board first appointed hereunder two shall hold office for a term of two years, two shall hold office for a term of three years, and one shall hold office for a term of four years, each term of office ending the first day of July. Upon expiration of each of such terms the term of office of each member thereafter appointed shall be four years. Each member shall hold over the expiration of his term until his successor shall be duly appointed and qualified. The Governor may remove any member of the Board for misconduct, incapacity or neglect of duty. Vacancies in the Board caused by death, resignation or removal from office shall be filled by appointment by the Governor for the unexpired term. Each member of the Board shall be a professional engineer of at least ten years active experience and of recognized good standing in his profession and shall be at least thirty-five years of age and shall have been a resident of this State for at least three years immediately preceding this appointment. Each member of said board except the members first appointed hereunder, shall also be registered as a professional engineer under this Act. The members of the Board shall receive as compensation, the sum of ten (\$10.00) dollars per day for the time actually spent in traveling to and from and in attending sessions of the Board and its committees, and each member shall receive all necessary expenses incident to the performance of his duties under this Act.

Section 5. Every member of the Board shall receive a certificate of his appointment from the Governor and before beginning his term of office shall file with the SECRETARY OF STATE his written oath for the faithful discharge of his official duty. Each member of the Board first appointed hereunder shall receive a certificate of registration under this Act from said Board. The Board shall adopt and have an official seal. The Board may make all by-laws and rules not inconsistent with law needed in performing its duties; but no by-laws or rule by which more than a majority vote is required for any specified action by the Board shall be amended, suspended or repealed by a smaller vote than that required for action thereunder.

Section 6. The Board shall annually elect from its members a chairman, a vice-chairman and a secretary. The secretary shall give a surety bond in the sum of three thousand (\$3,000.00) dollars conditioned for the faithful performance of his duties and for the accounting and paying over of all moneys received by him. The premium on said bond shall be paid from the fund of the Board hereinafter provided. The secretary shall keep on file a record of all certificates of registration granted. He shall receive and account for all fees derived from the operation of this Act, and shall pay to the State Treasurer, who shall keep such moneys in a separate fund, to be known as the Fund of the Board of Engineering Examiners; continued from year to year to be drawn against only for the expenses of the Board. Warrants for the payment of the expenses incurred shall be issued by the Comptroller General of the State and paid by the State

Treasurer upon presentation of vouchers regularly drawn by the chairman and the secretary of the Board, *Provided*, however, that at no time shall the total amount of warrants exceed the total amount of fees paid under this Act. On or before the 30th day of June in each year the Board shall submit to the Governor a written report of its transactions for the preceding year, and shall file with the SECRETARY OF STATE a copy of said report, together with a complete statement of the receipts and expenditures of the Board, attested by the affidavits of the chairman and secretary, and a complete list of those registered under this Act, with their addresses and the dates of their certificates of registration. The Board shall hold at least two regular meetings in each year, special meetings may be called in such manner as the by-laws of the Board may provide. Notice of all meetings shall be given in such manner as the by-laws of the Board may provide. At all meetings a majority of the Board shall constitute a quorum.

Section 7. The Board shall have power to employ, during its pleasure such clerks and other employees and to rent such offices as may be necessary for the proper performance by it of its duties as in this Act prescribed.

Section 8. The Board shall admit to examination any candidate who pays a fee of Fifteen (\$15.00) Dollars and submits evidence verified by oath and satisfactory to the Board that he

- (a) Is more than twenty-one (21) years of age.
- (b) Is of good character, and
- (c) Has been engaged in the practice of professional engineering or land surveying for at least four (4) years, and during that period has had charge of said work, as principal or assistant, for at least one year.
- (d) Or, in lieu of requirement (c) specified above, is a graduate from an engineering school.
- (e) *Provided*, however, That no person shall be eligible for registration who is not a citizen of the United States of America unless he has filed his first papers for naturalization; and then he will be required to have completed his naturalization within three years from the date he is granted certificate of registration, or he will be deprived from further practicing his profession or calling as set forth in this Act.

Section 9. Examinations for registration shall be held at regular or special meetings of the Board at such times and at such places within the State in each year as the Board shall determine. The scope of the examinations and the methods of procedure shall be prescribed by the Board with special reference to the applicant's ability to design and supervise engineering works which shall insure the safety of life and property. Examinations shall be held to determine the qualifications of applicants for registration separately in surveying or in any one of the branches of professional engineering, embracing civil, mechanical and electrical, mining or naval architecture. The examination may be either oral or partly written. As soon as practicable after the close of each examination the members of the Board who shall have conducted such examination shall make and sign and file with the secretary a certificate stating the action of the Board upon the application of each candidate, whereupon the Secretary of the Board shall notify each candidate of the result of his examination. A candidate failing on examination, may, after an interval of not less than one year, be examined again.

Section 10. In the case of examination as professional engineer, upon receipt of an additional fee of Ten (\$10.00) Dollars, the Board shall issue to any applicant who has been reported to have passed the examination conducted by the Board, a certificate of registration as a professional engineer in the branch or branches in which he is qualified, signed by the

chairman and secretary of the Board under the seal of the Board, whereupon such applicant shall be authorized to practice professional engineering as defined by this Act. In case of examination as land surveyor the Board shall issue to any applicant who has been reported to have passed the examination conducted by the Board, a certificate of registration as a land surveyor, signed by the chairman and secretary of the Board under the seal of the Board, whereupon such applicant shall be authorized to practice land surveying as defined by this Act. A certificate of registration as a professional engineer shall not carry with it the right to practice land surveying unless it is specially permitted by said certificate, which permission shall be granted by the Board without additional fee in the case of any applicant duly qualified as prescribed by the rules of the Board.

Section 11. At any time within one year after this Act has become effective, upon due application thereof and the payment of a fee of twenty-five (\$25.00) dollars the Board shall issue a certificate of registration, as provided by Section 10, to any professional engineer or land surveyor who shall submit evidence under oath and satisfactory to the Board that he is of good character, has been a resident of the State of South Carolina for at least one year immediately preceding the date of his application, and has practiced professional engineering or land surveying preceding the date of his application, and during that period has had charge of engineering work or land surveying as principal or assistant. After this Act shall have been in effect one year, the Board shall issue certificates of registration only as provided in Sections 5, 10 and 11 hereof.

Section 12. The Board shall, from time to time examine the requirements for the registration of professional engineers in other States, territories and countries and shall record those in which, in the judgment of the Board, standards not lower than those provided by this Act are maintained. The Secretary of the Board, upon the presentation to him by any person of satisfactory evidence that such person holds a certificate of registration issued to such person by proper authority in any such State, territory, or country as recorded and upon receipt by him of a fee of Twenty-five (\$25.00) Dollars shall issue to such person a certificate of registration under this Act, signed by the Chairman and Secretary under the seal of the Board, whereupon the person to whom such certificate is issued shall be entitled to all the rights and privileges conferred by a certificate issued after examination by the Board.

Section 13. It shall be the duty of the Board to inquire into the identity of any person practicing or claiming to be a land surveyor, or professional engineer. The Board shall have the power by four-fifths vote to revoke the certificate of any professional engineer or land surveyor registered hereunder, found guilty of any fraud, deceit or gross incompetency in his practice, or guilty of any fraud or deceit in obtaining his certificate, or in case he is found by the same vote to be incompetent. Proceedings for the revocation of license of registration shall be begun by filing with the Secretary of the Board written charges against the accused. The Board shall designate a time and place for a hearing and shall notify the accused of this action and furnish him a copy of all charges at least ten days prior to the date of the hearing. The accused shall have the right to appear personally or by counsel, to cross examine witnesses or to produce witnesses in his defense. The Board may summons witnesses and administer oaths. It shall be the duty of the Board to prosecute any persons violating the provisions of this Act.

Section 14. Every certified professional engineer so registered under this Act who desires to continue the practice of his profession shall annually pay to the Secretary of the Board a fee of Five (\$5.00) Dollars

on or before a date to be fixed by the Board, for which fee a renewal certificate of registration for the current year shall be issued.

Section 14-A. Every land surveyor so registered under this Act who desires to continue the practice of his profession shall annually pay to the Secretary of the Board a fee of Three (\$3.00) Dollars on or before a date to be fixed by the Board, for which fee a renewal certificate of registration for the current year shall be issued.

Section 15. An unrevoked certificate and endorsement of registry made as provided in this Act shall be presumptive evidence in all courts and places that the person named therein is legally registered.

Section 16. The provisions of the Act shall apply to every corporation domestic or foreign, engaged in the business of professional engineering within the State of South Carolina, except that certificate of registration issued hereunder shall be held by one or more of its officers or employees instead of by such corporation.

Section 17. The Board each year shall certify and publish a complete list of registered professional engineers and land surveyors with their business addresses.

Section 17-A. Nothing contained in this Act shall apply to land surveyors who shall have been engaged in the active practice of their profession as land surveyors as long as five years prior to the date hereof, but such surveyors may obtain registration upon voluntary compliance with the terms of this Act.

Section 18. Any person who, not being then legally authorized to practice professional engineering or land surveying within the State according to the provisions of this Act and so registered according to law, shall practice, or attempt or advertise to practice, or holding himself out as authorized to practice professional engineering or land surveying or shall use in connection with his name, or otherwise assume, use or advertise any title or designation tending to convey the impression that he is a professional engineer or registered land surveyors, shall be deemed guilty of a misdemeanor and shall for each offence of which he is convicted be punished by a fine not to exceed five hundred (\$500.00) dollars or by imprisonment not to exceed three months, or both such fine and imprisonment.

Section 19. This Act shall not apply to military engineering nor to any professional engineer working for the United States Government, nor to employees of railroads nor inter-state public service corporations. Nor to any professional engineer employed as an advisor or an assistant to a professional engineer registered under this Act; nor to any professional engineer coming from without this State and employed therein until a reasonable time, as prescribed by the rules of the Board, shall have elapsed to permit the registration of such person under this Act, *Provided*, That before practicing within this State he shall have applied for the issuance to him of a certificate of registration and shall have paid the fee prescribed in this Act.

Section 20. This Act shall not apply to any architect registered by the State of South Carolina under the provisions of the Act creating the State Board of Architecture.

Section 21. Persons licensed to practice professional engineering in this State under this Act shall be exempt from the provision of any Act providing for the licensing of architects or regulating the practice of architecture in so far as the definition of "buildings" in any said Architects' Act may include, or be included in the structures enumerated in Section 3 of this Act.

Section 22. All laws or parts of laws in conflict with the provisions of this Act be and the same are hereby repealed.

Section 23. This Act shall take effect immediately upon its passage and approval by the Governor.

Approved the 22nd day of March, A. D., 1922.

R. A. COOPER, Governor.

Amending Act Approved the 10th day of March, A. D., 1928.

JOHN G. RICHARDS, Governor.

National Council of State Boards of Engineering Examiners

ARTICLES OF AGREEMENT ON RECIPROCAL REGISTRATION

Article 1. Reciprocal registration as provided for in these Articles of Agreement shall be granted only to an applicant who is already registered in some state which is a member of this Council. A detailed professional record, properly attested, and accompanied by references as to character and qualification from three registered practicing engineers shall be filed with the applicant's board of examiners. Qualification for reciprocal registration shall be determined upon the basis of such professional record through consideration of which shall constitute examination.

Article 2. Engineering experience gained by the applicant prior to his reaching the age of eighteen years shall not be counted as a part of his professional experience.

Article 3. Professional experience shall be considered as beginning when the candidate has entered upon a position in professional engineering work which requires original thought and responsibility. For example:

(a) In the field experience shall begin to count when the applicant reaches a position or responsibility equivalent to that of actual transitman.

(b) In the shop or laboratory experience shall begin to count only after apprenticeship, foremanship, inspectorship or other subordinate positions unless the work done specifically shows that the applicant possesses originality of design and has had responsibility in his subordinate positions.

(c) In the office or drafting room experience shall begin to count when the applicant ceases to do merely tracing, lettering, or purely mechanical work requiring for its performance merely manual dexterity, and enters a position of responsibility where he begins actual design.

(d) Experience in the teaching of engineering shall begin to count when the applicant is a full-time instructor in engineering in an engineering school of recognized standing and each year of teaching shall be considered equivalent to one year of practice.

Article 4. The applicant shall have had ten years of experience in professional engineering, and in addition shall show that he is qualified to design as well as to direct engineering operations, as evidence of qualification for reciprocal registration, and his experience record shall show progressive advancement in the character of the work performed.

Each case shall be considered on its merits, and the experience record must be given in such complete detail that the board of examiners can determine the character of work performed by the applicant.

Article 5. Graduation from an engineering school of recognized standing shall be accepted as the equivalent of four years of such practice.

An engineering school of recognized standing shall be one which requires the equivalent of a high school or preparatory school diploma as an entrance requirement and demands the equivalent of a four years' course in engineering for graduation.

Article 6. Making reciprocal registration operative between the states shall be done by means of certification from one state to another of the applicant's qualifications. This certification shall be by means of a card

or form bearing the date, serial number and signatures of the officers and the seal of the board of the state issuing same. This card is to be printed and distributed by the Council of State Boards of Engineering Examiners.

Article 7. Whenever an applicant applies to his own state board for reciprocal registration, if his qualifications fully comply with the standard herein provided, he shall be granted the same.

(Note: The Council has by resolution interpreted "that he may be granted a reciprocal card by the state in which he was first registered, provided the state of which he is a resident does not have a law providing for the registration of engineers.")

Article 8. The aforesaid reciprocal registration certificate shall be *prima facie* evidence of qualification for registration in any state that is a member of this Council and that has subscribed to these Articles of Agreement. When such reciprocal registration certificate is presented, together with the legal fee required and such information (other than evidence of qualification) as may be requested for the records of the board to which the application is made, such board shall issue a registration certificate to the applicant.

Article 9. Any reciprocal certificate may be revoked by the state issuing same upon presentation to its board of examiners of good and sufficient evidence of incompetency, or proof that the applicant's character warrants such revocation.

Article 10. Should any question or disagreements in the interpretation of these Articles arise, such questions shall be referred to the Council for action at its next regular meeting, or if more expeditions action shall be necessary, they may be acted upon by the Council by letter ballot.

If action is taken by letter ballot, such action shall be conducted through the office of the Secretary of the Council in the customary manner; and the votes shall be counted not later than sixty days after forwarding from his office, by registered mail, of questions at issue. The Secretary of the Council shall thereupon immediately certify to the various member boards the roll call and results of the vote, and the determination of the questions at issue; and consequent actions shall be in accordance with the majority of the votes recorded.

